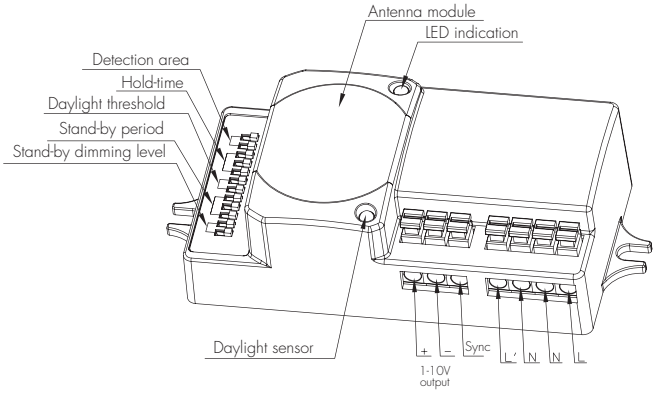
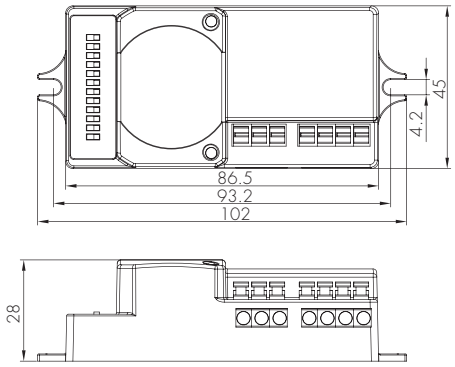
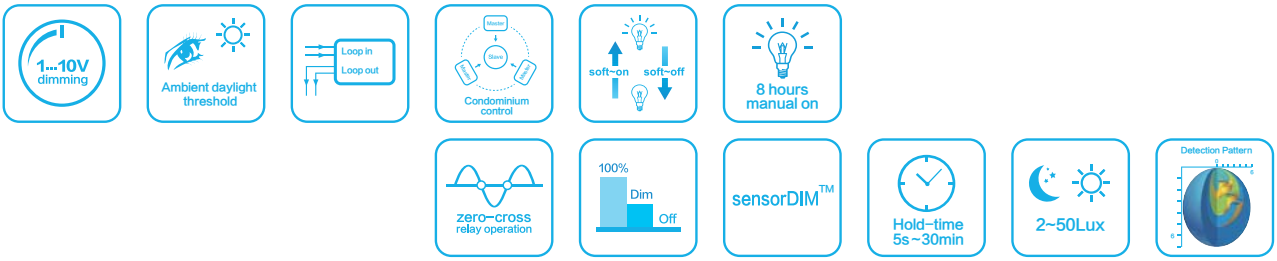
Advanced Version
Condominium Control

Model: HC019V







In many cases, several sensors are connected together to control the same fixture, or to trigger on each other, the sudden on/off may cause huge magnetic pulse and mis-trigger the sensor. Hytronik condominium sensor HC019V is specially designed for these applications with 1-10V output which employes a strong software to overcome the megnatic interferences.

Functions and Options

In a lot of buildings, there is a need that the moving object in corridor or undercover garage can trigger a transmitter luminarie with connected receiver luminaries from more than one direction. Every transmitter luminaries (containing the sensor) should be able to trigger the whole installation whether it's an on/off or dimming installation.

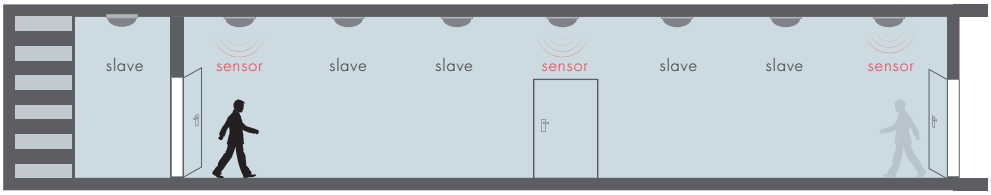
See the example below that there are several exits /entrances to the corridor, no matter which sensor at exit /entrance is triggered, the luminaries in the group will light up.

1 Tri-level Dimming Control (Corridor Function)

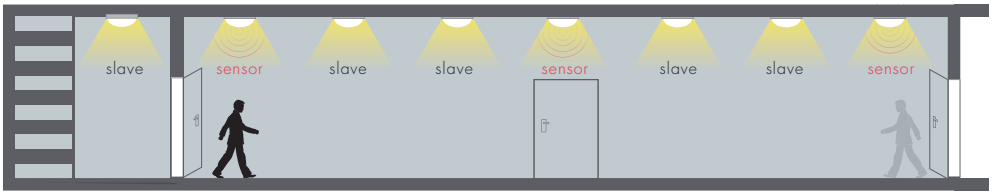
Same as Tridonic excel control gear, Hytronik builds this function inside the motion sensor to achieve tri-level dimming control, for some areas require a light change notice before switch-off.

It offers 3 levels of light:100%-->dimmed light (10%, 20%, 30%, 50% optional)-->off; and 2 periods of selectable waiting time: motion hold-time and stand-by period; selectable daylight threshold and freedom of detection area.

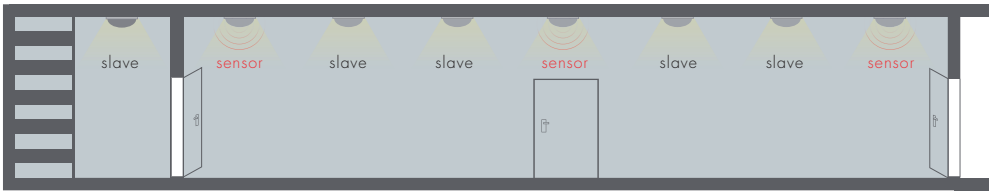
With sufficient natural light, the light does not switch on when presence detected.



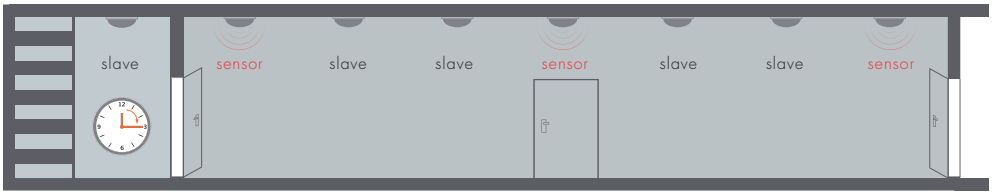
With insufficient natural light, the person comes from any direction, the group of lamps switch on.



After the hold-time, the whole group of lamps dim to pre-defined dimming level when no motion is detected.



After the stand-by period, the whole group of lamps switch off automatically.



2 Condominium control function

By connecting all the "1-10V –" and "SYNC" terminals in parallel (see wiring diagram next page), if there is any master fixture (containing sensor) is triggered by motion, all slave luminaries will light up at the same time.

3 8H Manual on Mode for LED Lamp

Rapidly turn off/on the power supply three times within 3 seconds, the light will be 100% on for 8 hours, and then goes to sensor mode automatically after 8 hours. Useful when sensor function is not needed in special occasion.
Note: this 8H manual on mode can be cancelled by turning off/on the power supply one time within 1second.

4 Ambient daylight threshold

Switch the power supply to the sensor two times within 2 seconds, the sensor can set the ambient lux level as the new threshold.
Both the settings on DIP switch and the ambient lux threshold learned can overwrite each other.
This feature enables the daylight sensor to be commissioned to the environment in which it is installed. The latest action controls.
(More details of the operation procedure please refer to user manual).

5 Zero-cross relay operation

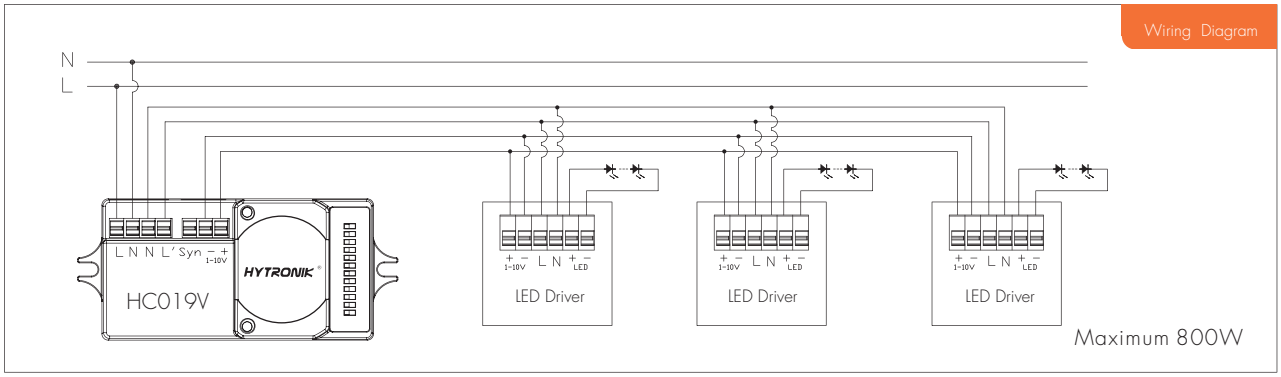
Designed in the software, sensor switches on/off the load right at the zero-cross point, to ensure the in-rush current is minimised, enabling the maximum lifetime of the relay.

6 Loop-in and loop-out terminal

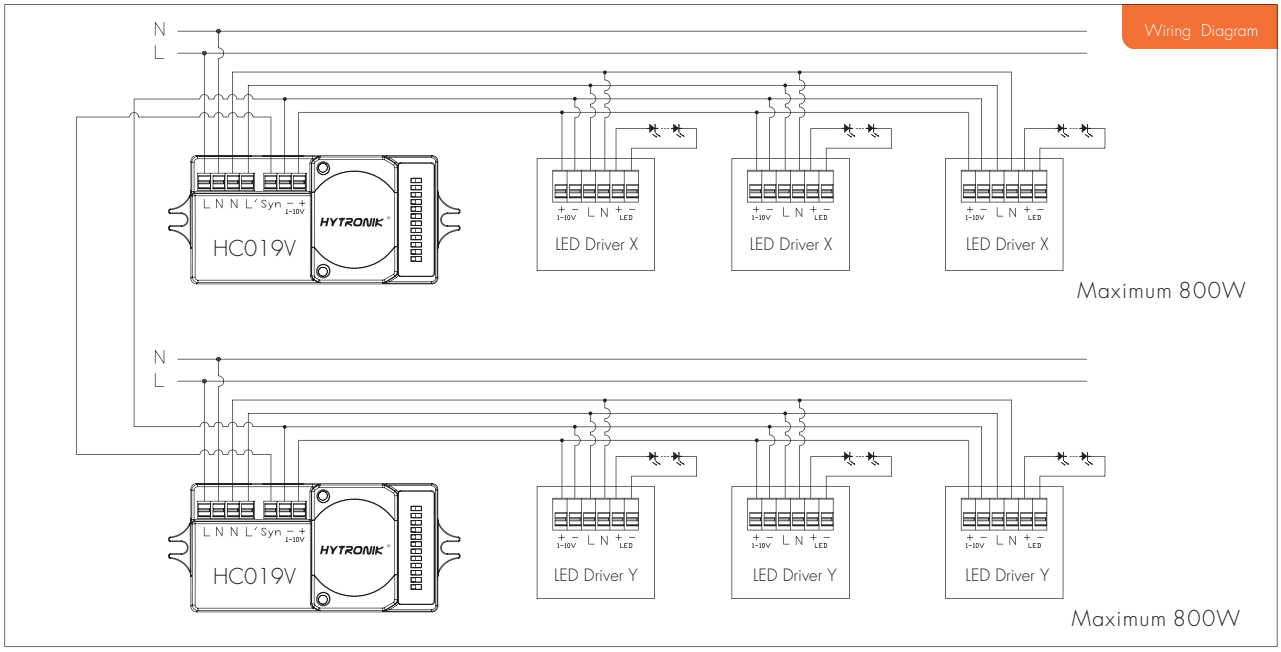
Double L N terminal makes it easy for wire loop-in and loop-out, and saves the cost of terminal block and assembly time.

7 Wiring diagram

1 sensor controls a group of ballast /driver

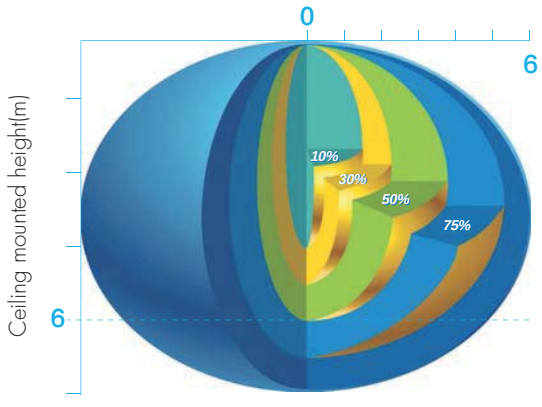


Multiple sensors control the same group of ballast /driver

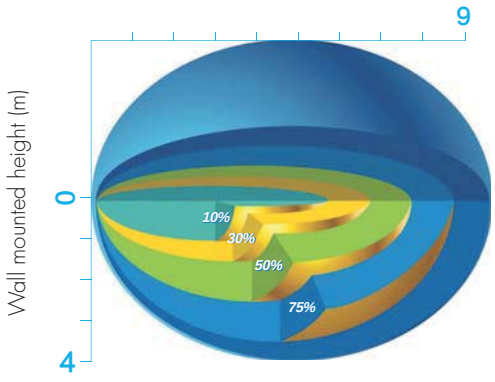


Note: this 1-10V output is isolated, SELV output. Do not connect the 1-10V terminals on driver X to Driver Y.

Detection Pattern



Ceiling mounted detection pattern (m)



Wall mounted detection pattern (m)

Settings

1 Detection area

Detection area can be reduced by selecting the combination on the DIP switches to fit precisely for each specific application.

	1	2	
I	●	●	100 %
II	●	○	75%
III	○	●	50%
IV	○	○	10%

I – 100%
II – 75%
III – 50%
IV – 10%

2 Hold-time

Hold-time means the time period you would like to keep the lamp on 100% after the person has left the detection area.

	1	2	3	
I	●	●	●	5s
II	●	●	○	30s
III	●	○	●	1min
IV	●	○	○	5min
V	○	●	●	10min
VI	○	●	○	20min
VII	○	○	○	30min

I – 5s
II – 30s
III – 1min
IV – 5min
V – 10min
VI – 20min
VII – 30min

3 Daylight sensor

The daylight threshold can be set on DIP switches, to fit for particular application.

	1	2	
I	●	●	Disable
II	●	○	50Lux
III	○	●	10Lux
IV	○	○	2Lux

I – Disable
II – 50Lux
III – 10Lux
IV – 2Lux

4 Stand-by period (corridor function)

This is the time period you would like to keep at the low light output level before it is completely switched off in the long absence of people.

Note: "0s" means on/off control;
"+ ∞"means bi-level dimming control, fixture never switches off.

	1	2	3	
I	●	●	●	0s
II	●	●	○	10s
III	●	○	●	1min
IV	●	○	○	5min
V	○	●	●	10min
VI	○	●	○	30min
VII	○	○	●	1h
VIII	○	○	○	+∞

I – 0s
II – 10s
III – 1min
IV – 5min
V – 10min
VI – 30min
VII – 1h
VIII– +∞

5 Stand-by dimming level

This is the dimmed low light output level you would like to have after the hold-time in the absence of people.

	1	2	
I	●	●	10%
II	●	○	20%
III	○	●	30%
IV	○	○	50%

I – 10%
II – 20%
III – 30%
IV – 50%

Technical Data

Operating voltage	220-240VAC
Switched power	Max.800W (capacitive) Max.2000W (resistive)
Stand-by power	<1W
Warm time	20s
Detection area	10/50/75/100%, can be customized
Hold-time	5s/30s/1min/5min/10min/20min/30min, can be customized
Stand-by period	0s/10s/1min/5min/10min/30min/1h/+ ∞, can be customized
Stand-by dimming level	10%/20%/30%/50%, can be customized
Daylight threshold	2~50Lux, disable, can be customized
Sensor principle	Microwave motion detector
Microwave frequency	5.8GHz+/-75MHz
Microwave power	<0.2mW
Detection range	Max. (ØxH): 12m x 6m
Detection angle	30°~150°
Mounting height	Max.6m
Operating temperature	-35°C ~ +70°C
IP rating	IP20 IP65 (mounted in Hytronik special box)
Certificate	Semko, CB, EMC, CE, R&TTE, SAA